

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Lu et al.

Serial No.: 09/076,517

For: AUDIENCE
MEASUREMENT SYSTEM
FOR DIGITAL TELEVISION

Filed: May 12, 1998

Group Art Unit: 2611

Examiner: Jason P. Salce

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BRIEF ON APPEAL

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Sir:

Pursuant to the Notice of Appeal mailed September 10, 2004 in
connection with the above-identified patent application, Applicants
respectfully submit the instant Brief on Appeal in accordance with 37 C.F.R. §
41.37.

I. Real Party In Interest

The above-referenced patent application has been assigned to Nielsen
Media Research, Inc., who is the real party in interest to this appeal. The

assignment has been recorded in the United States Patent and Trademark Office ("PTO") at Frame 0634 of Reel 9249.

II. Related Appeals and Interferences

The applicant is unaware of any related appeals or interferences. However, the claims pending in this application were copied from Massetti, U.S. Patent 5,974,299 in an effort to provoke an interference. Because of the rejections on appeal, no interference has been declared as of yet.

Moreover, the applicant of the application pending in the present appeal has requested reexamination of U.S. Patent 5,974,299, the patent from which the claims on appeal were copied. That request has been granted and has been assigned control no. 90/007,057. The arguments and positions taken in that reexamination may be of interest to the Board to the extent they relate to the claims on appeal.

III. Status of the Claims

Currently, claims 70, 71 and 159 are pending in this application. The pending claims are presented in the Claims Appendix of this Brief. Claims 70, 71 and 159 stand rejected under 35 U.S.C. § 112, first paragraph, and under 35 U.S.C. § 102 and/or 103. Therefore, claims 70, 71 and 159 form the subject matter of this appeal.

As mentioned above, claims 70, 71 and 159 were copied into the instant application in an effort to provoke an interference with Massetti, U.S. Patent 5,974,299 (the "'299 Patent"). By way of background, the applicant for

the '299 Patent, Enrico Massetti, is a former employee of Nielsen Media Research, the assignee of the instant application. Days after his working relationship with Nielsen Media Research came to a close, Mr. Massetti filed the patent application which later matured into the '299 Patent. However, on March 12, 1998, fifteen days before Mr. Massetti filed his patent application, the applicants filed the instant application. After learning of the '299 Patent, the applicants copied claims of the '299 Patent into the instant application in an effort to provoke an interference. In particular, independent claim 1 of the '299 Patent was copied into this application as claims 70, 71 and 159, which now form the subject matter of this appeal.

Examiner Christopher Grant, the very same examiner who examined and allowed the '299 Patent, rejected claims 70, 71 and 159 as unpatentable over Aras et al, U.S. Patent 5,872,588. (Office Action Mailed November 15, 2002, pp. 3-5). This was a surprising turn of events because the instant application has an earlier filing date than the '299 Patent and the Aras et al. reference was considered by Examiner Grant during the proceedings which led to the issuance of the '299 Patent. Since Examiner Grant found the copied Massetti claims patentable over Aras et al. in the context of the '299 Patent, logical consistency demanded that those same claims would be patentable over Aras et al. in applicants' earlier filed application; unless, of course, the USPTO acted in error in allowing the '299 Patent.

In view of the USPTO's inconsistency, the applicants for this application on appeal responded by traversing the rejections (Response to the

Office Action Dated November 19, 2002). In particular, the applicants argued:

applicants respectfully submit that, in rejecting claims 70, 71 and 159 based on Aras, the Office is acting in an inconsistent manner that is an affront to justice and the public interest. In particular, as the Office well knows, claims 70, 71, and 159 have been copied from Massetti, U.S. Patent 5,974,299. The Massetti ['299] Patent enjoys a filing date of May 27, 1998 and was expressly allowed over the Aras Patent. Therefore, in examining the very claims now pending in this application, the Patent Office previously ruled that these exact claims are patentable over Aras.

The application now before the Office was filed on May 12, 1998, two weeks prior to the Massetti ['299] Patent. Therefore, as a matter of law and consistency, if the claims pending in this application are patentable over Aras to Massetti (as the Office has already ruled), then those same claims must be patentable to the instant applicants over Aras; unless the Office has concluded that those same claims are not patentable to Massetti. If the Office has concluded that it erred in issuing the Massetti ['299] Patent, and that the claims now pending in this application are not patentable to either Massetti or the instant applicants, then in the interest of the public, the Office must correct its error by initiating a reexamination of the Massetti ['299] Patent. If, on the other hand, the Office does not believe it has erred in issuing the Massetti ['299] Patent, then to act consistently with that conclusion and the law, the Office must drop the rejections based on Aras and declare an interference between the instant application and the Massetti ['299] Patent as requested in applicants' prior response.

Therefore, applicants respectfully request that the Office discharge its responsibility to the public as demanded by law and equity by either reexamining the Massetti

['299] Patent at its own initiative, or by dropping the Aras rejections in this application and declaring an interference without further delay.

(Response to the Office Action Dated November 19, 2002, pages 4-5)(emphasis in the original).

In response to this clear explanation of the inconsistency of his actions, Examiner Grant sustained his rejections based on Aras et al. and implicitly invited the requestor to file a request for reexamination (Office Action Mailed August 11, 2003, pages 9-10 (section e)). Specifically, Examiner Grant stated, "Applicant's [sic] request for the Office to initiate reexamination is noted. Applicants are reminded that 'Any person at any time may file a request for reexamination by the Office of any claim of a patent on the basis of any prior art cited under the provisions of section 301 of this title.'" (Id. at page 10). Therefore, the applicants filed a request for reexamination of the '299 Patent based on the positions taken by the Examiner in this appeal.

In requesting reexamination, the assignee of the instant application stated, through its counsel:

the undersigned notes for the record that the Requestor has challenged the Examiner's position regarding the patentability of claim 1 of the '299 Patent over Aras et al. ... on the basis that Aras et al. shows the insertion of codes into a data stream, not a control stream as recited in claim 1. The Examiner has rejected this argument. Because of the Office's inconsistent positions regarding the patentability of claim 1 of the '299 Patent, the Requestor has filed this Request for Reexamination to have the issue resolved. To this end, the Requestor has drafted this Request for Reexamination from the perspective of the Examiner of the '517

application [i.e., this application on appeal], namely, that the control stream/data stream distinction is immaterial to the patentability question, and has supplemented the Examiner's argument with art to attack the patentability of the remaining claims of the '299 Patent. Because it is possible that the Office will ultimately disagree with the Examiner of the '517 application [i.e., via this appeal and the noted reexamination], and conclude that the control stream/data stream distinction (or another distinction identified by Massetti) causes the claims of the '299 Patent to be patentable, the Requestor is maintaining the '517 application [i.e., this application on appeal], pending the outcome of this reexamination proceeding. Thus, it should be understood that this Request for Reexamination is arguing the position of the Examiner of the '517 application (with supplementation), and, is, thus, inconsistent with the position taken by the Requestor in the '517 application [i.e., with the position taken in this application on appeal].

(Reexamination Control No. 90/007,057, Request for Reexamination, Pages 4-5)(citations omitted).

In short, this appeal and Reexamination Control No. 90/007,057 are being concurrently pursued to enable the USPTO to determine whether claims 70, 71 and 159 are patentable over Aras et al., and whether an interference over those claims should be declared.

In view of the foregoing, rejected claims 70, 71 and 159 form the subject of this appeal.

IV. Status of the Amendments

The amendments that were made in this application have been entered. No amendments were filed after the final Office action.

V. Summary of the Claimed Subject Matter

Although reference numerals and specification citations are inserted below in accordance with C.F.R. 41.37(c)(1)(v), these reference numerals and citations are merely examples of where support may be found in the specification for the terms used in this section of the brief. There is no intention to in any way suggest that the terms of the claims are limited to the examples in the specification. Although, as demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law, it is improper under the law to read limitations from the specification into the claims. Pointing out specification support for the claim terminology as is done here to comply with rule 41.37(c)(1)(v) does not in any way limit the scope of the claims to those examples from which they find support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification. In short, the reference numerals and specification citations are not to be construed as claim limitations or in any way used to limit the scope of the claims.

In the invention as defined in claim 70, an audience rating system (60, 100, 200, 300, 400) for digital television (110, 224, 324, 410) (Title, original claim 1, Page 9, line 20-Page 10, line 2) extracts at least one identification code for at least one digital stream of a first channel from a control stream of a multiplexed digital transmission (Page 10, lines 13-19, Page 6, lines 15-23, and Page 46, line 17-Page 47, line 8). This extraction occurs when reception of the first channel by a receiver (34, 36, 42, 52, 56) begins (Page 26, lines 9-

20, Page 46, line 17- Page 47, line 8, and Page 47, line 19-Page 48, line 11). Further, the audience rating system (60, 100, 200, 300, 400) records at least one identification code extracted and the time reception of the first channel begins (Page 47, line 19-Page 48, line 11). In addition, the audience rating system (60, 100, 200, 300, 400) of claim 70 extracts at least one identification code for at least one digital stream of any subsequent channel from the control stream of the multiplexed digital transmission (Page 10, lines 13-19, Page 6, lines 15-23, Page 46, line 17-Page 47, line 8, and Page 47, line 19-Page 48, line 11). This extraction occurs when reception of the subsequent channel by the receiver begins (Page 26, lines 9-20, Page 46, line 17- Page 47, line 8, and Page 47, line 19-Page 48, line 11). Furthermore, the audience rating system (60, 100, 200, 300, 400) records at least one extracted identification code and the time reception of the subsequent channel begins (Page 47, line 19-Page 48, line 11).

In the invention as recited in claim 71, the audience rating system (60, 100, 200, 300, 400) of claim 70 records the time that reception by the receiver is ended. (Page 25, line 19-Page 26, line 8, Page 26, ll. 9-14, Page 53, ll.1-5, Page 26, line 20-Page 27, line 3, Page 53, ll.5-7, Page 47, line 19-Page 48, line 11, and Page 2, lines 5-7).

In the invention as recited in claim 159, the audience rating system (60, 100, 200, 300, 400) of claim 70 is for digital television and radio. (Page 1, lines 8-11, Page 4, ll. 3-5, Page 19, ll. 15-18, Page 53, line 22-Page 54, line 3, Page 3, lines 5-6, Page 1, line 8-Page 2, line 7, Page 30, lines 5-14).

VI. Grounds of Rejection To Be Reviewed on Appeal

The grounds of rejection to be reviewed on appeal are as follows:

- Ground 1: The Examiner's contention that claims 70, 71 and 159 do not meet the written description requirement of 35 U.S.C. § 112, first paragraph.
- Ground 2: The Examiner's contention that claims 70, 71 and 159 are unpatentable over Aras et al., U.S. Patent 5,872,588.

VII. Argument

Ground 1. The Examiner's Contention That Claims 70, 71 And 159 Do Not Meet The Written Description Requirement Of 35 U.S.C. § 112 Is In Error

As explained below, the of 35 U.S.C. § 112, first paragraph, rejections of claims 70, 71 and 159 are based on errors in law and in fact.

A. Claim 70 Does Not Contain Any Of The Objected-to Claim Language

The final Office actions rejects claim 70 for failure to satisfy the written description requirements of 35 U.S.C. § 112, first paragraph, because it allegedly includes the phrase "recording the time that reception by the receiver is ended." However, that phrase does not appear in claim 70. Instead, it is present in dependent claim 71. Therefore, since none of the language forming the basis for the 35 U.S.C. § 112, first paragraph, rejections appears in claim 70, the 35 U.S.C. § 112, first paragraph, rejection of claim 70 is in error and must be overturned.

B. The Written Description Requirement Does Not Require Ipsis Verbis Usage of the Claim Language

Before addressing the factual errors in the 35 U.S.C. § 112, first paragraph, rejections of claims 71 and 159, it is noted that these rejections

appear to be based on an overly strict reading of the requirements of § 112, first paragraph. In particular, all of the rejections appear to be based on the premise that the rejected claims are not supported by the specification because the *exact* words used in those claims do not appear word-for-word in the specification. However, the law does not require such word-for-word usage. Instead, the law is quite clear that “a claimed invention need not be described *ipsis verbis* in order to satisfy the disclosure requirement of 35 U.S.C. §112.” *Ex parte Holt*, 19 U.S.P.Q.2d 1211, 1213 (B.P.A.I. 1991). Thus, the fact that certain terms of a claim may or may not appear in the specification is irrelevant to the 35 U.S.C. § 112, first paragraph, inquiry.

Rather, the focus of the 35 U.S.C. § 112, first paragraph, inquiry should be upon whether the specification as a whole teaches a person of ordinary skill in the art how to make and use the claimed invention. In the words of the Federal Circuit:

Enablement is a legal determination of whether a patent enables one skilled in the art to make and use the claimed invention. It is not precluded even if some experimentation is necessary, although the amount of experimentation needed must not be unduly extensive. Enablement is determined as of the filing date of the patent application. Furthermore, a patent need not teach, and preferably omits, what is well known in the art.

Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986).

Further, the form used to convey the enabling teachings is immaterial.

Rather,

[h]ow a patent application achieves compliance with 35 U.S.C. §112, first paragraph, is immaterial. The only requirement is that the specification describe the claimed invention sufficiently for those of ordinary skill in the art to recognize that the applicant invented the subject matter he now claims.

In re Voss, 557 F.2d 8, 194 U.S.P.Q. 267, 271 (C.C.P.A. 1977).

In addition, the specification is not required to teach what is known and/or obvious to a person of ordinary skill in the art. On the contrary, it has long been established that “under 35 U.S.C. §112, a specification need not teach that which is obvious to those in the art.” *In re Sureau, Kremer, and Dupre*, 373 F.2d 1002, 153 U.S.P.Q. 66, 70 (C.C.P.A. 1967).

With the legal requirements squarely in mind, we turn to the factual reasons that the 35 U.S.C. § 112, first paragraph, rejections of claims 71 and 159 are in error and must be overturned.

C. The § 112 Rejection of Claim 71 Is In Error

Turning to the § 112, first paragraph, rejection of claim 71, the final Office action contends that the recitation “recording the time that reception by the receiver is ended” is not supported by the specification. (Final Office Action, Page 3). Applicants respectfully submit that this contention is in error. Applicants’ specification clearly discloses software agents that may reside in a receiver such as a digital television (page 25, line 19-Page 26, line 8) to “monitor operating tasks in order to create time-stamped records containing

tuning and/or other data regarding ***operation of the particular piece of equipment*** in which the software agents are resident.” (Page 26, ll. 9-14)(emphasis added). The specification explains that the monitored “operating tasks may be ***operating system events*** of the operating system used by the equipment in which the software agent is resident.” (Page 53, ll.1-5). The specification also points out that each item of television equipment at a monitored site should have a “respective software agent within it so that a complete set of operating tasks can be captured.” (Page 26, line 20-Page 27, line 3). Thus, the specification unmistakably discloses capturing ***a complete set of operating system events*** of all of the equipment of a monitored television system.

It is hard to imagine a more fundamental operating system event than power shut down which, of course, is clearly a time at which reception by the receiver is ended. Since, in a disclosed example, the software agents are expressly described as creating time-stamped records of operating system events, it is clear that the specification contemplates and supports recording a time at which reception by the receiver¹ is ended as recited in claim 71.

This point is further supported in that the specification explicitly states: “the software agents 112, 118, and 122 may monitor any function of the

¹ The specification indicates that a software agent may be used to monitor the operating tasks of a digital converter 106 (i.e., a set top box) (Page 27, lines 4-9), a digital television 110 (Page 28, lines 1-7), and/or a personal computer 104 (Page 28, lines 8-14). As discussed in the specification, any of the digital converter 106, the digital television 110, and/or the personal computer 104 may be used to receive digital television programs and, thus, each of the digital converter 106, the digital television 110, and/or the personal computer 104 is a receiver.

monitored equipment as long as the desired data is collected.” (Page 53, ll.5-7). Since terminating reception is clearly a function of the monitored equipment, it is self-evident that applicants’ specification provides explicit support for the phrase “recording the time that reception by the receiver is ended” as contained in claim 71. Accordingly, on this basis alone, it is respectfully submitted that the phrase “recording the time that reception by the receiver is ended” is fully supported by the specification and, thus, the § 112, first paragraph, rejection of claim 71 must be overturned as factually incorrect.

However, the specification provides even more support for the phrase “recording the time that reception by the receiver is ended.” For example, the example software agent described in connection with the flowchart of FIG. 7 is expressly described as logging the “TV ON status” of a monitored television if this is a new event (i.e., when the television is turned on). (See FIG. 7, block 508 and page 47, lines 10-14 stating “the software agent 500 at block 508 causes the ON state of the monitored viewing equipment to be logged, provided that this ON state is a new state for the monitored viewing equipment and the monitored viewing equipment is ON.”) Thus, it is quite clear that the specification provides explicit support for recording the power state of a monitored digital television. Since the specification expressly describes recording when a television is turned on, it would be obvious that the system could also record when the television is turned off. As mentioned above, “under 35 U.S.C. §112, a specification need not teach that which is obvious to those in the art.” *In re Sureau, Kremer, and Dupre*, 373 F.2d 1002, 153 U.S.P.Q. 66, 70 (C.C.P.A. 1967). Therefore, the § 112, first paragraph,

rejection of claim 71 must be overturned as factually incorrect on this alternative grounds.

As still another example, the phrase “recording the time that reception by the receiver is ended” is not limited to a power down event, but may also refer to a channel change (i.e., reception of a first channel by a receiver ends when the receiver is tuned to a different channel). As such, since a disclosed example clearly logs the time that a new channel is tuned (i.e., reception of a new channel beings) (see Page 47, line 19-Page 48, line 11), it also inherently logs the time that reception of the previous channel is ended. Therefore, this alternative grounds provides another independent, sufficient basis for overturning the § 112, first paragraph, rejection of claim 71 as factually incorrect.

As still another reason for overturning the § 112, first paragraph, rejection of claim 71, the specification incorporates Thomas et al., U.S. Patent 5,481,294 by reference (Page 2, lines 5-7). Thomas et al. states:

The data available from the household metering apparatus 14 of the television audience measurement system 10 generally comprises a chronologically ordered set of tuning records 120 shown in FIG. 4, where a tuning record consists of a flag field 122, a type field 124 (e.g., to characterize the signature as having been extracted in response to different types of conditions, such as a scene change, absolute timing, a channel change, a **television on/off change**, and/or the like), a code field 126 and a program signature field 128 which together contain either a corresponding ancillary code or a corresponding program signature, and a time data field 130 containing the time at which (i) the corresponding ancillary code was detected,

or (ii) the corresponding program signature was extracted, or (iii) the corresponding flag was set.

(Thomas et al., U.S. Patent 5,481,294, Col. 16, lines 8-23)(emphasis added).

Thus, not only do the above described examples expressly recited in the instant specification contemplate “recording the time that reception by the receiver is ended,” but an example of the incorporated-by-reference Thomas Patent also expressly contemplated recording the time at which reception ends. Thus, the Thomas disclosure, which forms a part of the specification of the application on appeal, also provides independent, sufficient grounds for overturning the erroneous § 112, first paragraph, rejection of claim 71.

In view of the foregoing, it is evident that there are at least five separately sufficient, alternative grounds for overturning the 35 U.S.C. § 112, first paragraph, rejection of claim 71. Accordingly, the Board is expressly requested to overturn that rejection.

D. The Examiner’s Counterarguments Concerning Claim 71 Are In Error

In the final Office action, the Examiner attempts to reply to the arguments for withdrawing the erroneous 35 U.S.C. § 112, first paragraph, rejection of claim 71. For instance, on Page 8, section “a” of the final Office action, the Examiner identifies various sections of the specification relied upon by the applicants in support of the phrase “recording the time that reception by the receiver is ended,” and repeatedly states that the cited passages do not use the phrase “recording the time that reception by the

receiver is ended.” The Examiner’s comments betray the fact that, rather than reviewing the specification as it would be understood by a person of ordinary skill in the art, the Examiner is improperly attempting to impose an *ipsis verbis* requirement on the applicants. As noted above, it is not necessary for the specification to use the exact claim language to satisfy the requirements of 35 U.S.C. § 112, first paragraph. The Examiner’s repeated indication that he does not see the exact phrase “recording the time that reception by the receiver is ended” is immaterial, except to the extent it reveals that the Examiner is using an incorrect legal standard in rejecting the claims of this application.

Also, on Page 8 of the Final Office action, the Examiner states, “It is true that the specification describes creating time stamps records of operating system events. However, the specification only describes events to be tuning and demographic data.” While the Examiner is certainly correct that “the specification describes creating time stamps records of operating system events,” he is flatly wrong to state that “the specification only describes [such] events to be tuning and demographic data.”

As discussed above, applicants’ specification clearly discloses software agents that may reside in a receiver such as a digital television (Page 25, line 19-Page 26, line 8) to “monitor operating tasks in order to create time-stamped records containing tuning **and/or other data regarding operation of the particular piece of equipment** in which the software agents are resident.” (Page 26, ll. 9-14)(emphasis added). The specification explains that the monitored “operating tasks may be **operating system events** of the operating system used by the equipment in which the software agent is resident.” (Page

53, ll.1-5). Nowhere is “other data” limited to tuning and demographics data. Further, there is no special definition in the specification that would limit the meaning of the term “*operating system events of the operating system* used by the equipment in which the software agent is resident” to tuning and demographics data. See, In re Paulsen, 20 F.3d 1475, 1480 (Fed. Cir. 1994) (where an inventor chooses to be his own lexicographer and gives terms uncommon meanings, he must set out the uncommon definition in the patent disclosure.); Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985,989 (Fed. Cir. 1999)(there is a “heavy presumption” that claim language has its ordinary meaning). Since the specification does not identify a special meaning for the term “operating system events,” that term must be given its ordinary meaning. The Examiner’s proposed attempt to improperly import an excessively narrow meaning on the term “operating system events” to have a meaning inconsistent with the common definition of that term (i.e., to be narrowly restricted to “tuning and demographic” data) violates the legal principles noted above, and, is, thus, improper.

The Final Office action goes on to argue “Even if Applicant [sic] is correct (the Examiner finds this very much hard to believe) that **terminating reception is clearly a function of the monitored equipment**, the Examiner asserts that the disclosure is still defective because it fails to adequately describe how the software agents monitor the terminating or shutting off function.” (Final Office action, Page 9)(emphasis in the original). The statement the Examiner emphasized in the above quote suggests that the Examiner is of the mind that terminating reception is **not** a function performed

by a television. If this is the case, the Examiner's position is completely indefensible as the Board may observe by simply turning off a television or changing a television channel. Clearly, television reception is performed by and terminated by a television receiver, and is, thus, a function of that equipment.

As for the second portion of the statement, (i.e., "it fails to adequately describe how the software agents monitor the terminating or shutting off function"), as explained above, the software agents are expressly described as monitoring "operating system events of the operating system used by the equipment in which the software agent is resident." Since "power down" or "channel change" events would clearly be reflected by events in the operating system of the monitored device (e.g., a television), the description of the operation of the software agents is plainly a sufficiently enabling disclosure to monitor "terminating or shutting off functions" as well as channel change functions of a receiver.

As a final counterargument, the Examiner states:

It is self evident that the disclosure pertains to identifying the viewer and monitoring what the viewer was watching for statistical purposes. Again, the disclosure does not remotely disclose or even suggest monitoring, collecting or "*recording the time that reception by the receiver ends*" **as now recited in claim 70²**.

² As noted above, this phrase does not appear in claim 70, but is instead in claim 71.

(Final Office action, Page 9)(emphasis in the original). This argument is a non-sequitor to a person of ordinary skill in the art. First, a television may only be watched when it is on. Therefore, the time and occurrence of the termination of reception is a very important data point in “monitoring what the viewer was watching for statistical purposes.” Accordingly, to state that “the disclosure pertains to identifying the viewer and monitoring what the viewer was watching for statistical purposes” and that “the disclosure does not remotely disclose or even suggest monitoring, collecting or recording the time that reception by the receiver ends” is to contradict oneself. Clearly, a person of ordinary skill in this art would know that recording the time at which reception ends (either by power off or channel change) is essential to monitoring “what the viewer was watching for statistical purposes.”

In view of the foregoing, it is respectfully submitted that the 35 U.S.C. § 112, first paragraph, rejection of claim 71 must be overturned.

E. The § 112 Rejection of Claim 159 Is In Error

The § 112, first paragraph, rejection of claim 159 must also be withdrawn. The Office action alleges that the phrase “and radio” is not supported by applicants’ specification. However, applicants’ specification expressly states, “Of the many approaches to measuring the usage of electronic entertainment equipment (commonly called tuning data”), one approach involves the addition of an identifying code to ***a radio or television program.***” (Page 1, lines 8-11). The specification also expressly indicates that “changes in the methods of measuring the reception of television and

radio programming are required because of a planned change-over from analog to digital broadcasting.” (Page 4, ll. 3-5)(emphasis added). Further, many of the examples given in applicants’ specification involve the detection or attempted detection of audio codes embedded in a program stream, and/or the collection of audio signatures of tuned programs. (see, for example, Page 19, ll. 15-18 which states, “The first embodiment 60 measures such tuning by detecting program identification codes and/or extracting signatures from the audio portion of the television signal to which a receiver is tuned.”). Clearly, there is a direct correlation between the audio portion of a television program and a radio signal, and a person of ordinary skill in the art would have no trouble recognizing from these disclosures that detecting audio codes and/or collecting audio signatures could readily be performed interchangeably on audio signals output by television speakers and audio signals output by radio speakers. To state otherwise is to lower the level of ordinary skill below the level of common sense.

This point is further enforced by the applicants’ specification which expressly states, “although not shown in Figures 2-5, the digital television reception equipment of the embodiments shown therein may further include auxiliary digital television equipment such as a VCR, a digital video disk player, a video game, or other entertainment system.” (Page 53, line 22-Page 54, line 3). It is hard to imagine a more widespread entertainment system used with a television than a stereo system including radio reception capability. Further, Page 1, lines 8-11 expressly refers to “electronic entertainment equipment” as including equipment to receive a “radio or television program.”

Thus, a person of ordinary skill would readily recognize that the monitoring techniques disclosed in the application were in no way limited to television entertainment systems, and would instead recognize that those techniques encompass any entertainment system that could be coupled to a television including, for example, a radio. In this regard, the Board is reminded that “under 35 U.S.C. §112, a specification need not teach that which is obvious to those in the art.” *In re Sureau, Kremer, and Dupre*, 373 F.2d 1002, 153 U.S.P.Q. 66, 70 (C.C.P.A. 1967).

As still another reason for overturning the § 112, first paragraph, rejection of claim 159, the specification incorporates Lu et al., U.S. Patent 5,594,934 by reference (Page 3, lines 5-6). Among other things, Lu et al. states:

The plurality of program sources 36 may be, for example, AM radio stations for transmitting AM channels, FM radio stations for transmitting FM channels, television stations for transmitting both VHF and UHF television channels, cable head-ends for transmitting cable channels, and/or the like.

(Lu et al., U.S. Patent 5,594,934, Col. 6, lines 11-16). Thus, not only does the above described example expressly recited in the instant specification contemplate monitoring “other entertainment systems” (Page 53, line 22-Page 54, line 3) and identify “radios” as one type of commonly monitored system (Page 1, lines 8-11), but an example of the incorporated-by-reference Lu et al. Patent expressly identifies radio as a type of system to monitor. Thus, the Lu et al. disclosure, which forms a part of the specification of the application on

appeal, also provides grounds for overturning the erroneous § 112, first paragraph, rejection of claim 159.

**F. The Examiner's Counterarguments
Concerning Claim 159 Are In Error**

In the final Office action, the Examiner attempts to reply to the arguments for withdrawing the erroneous 35 U.S.C. § 112, first paragraph, rejection of claim 159. For instance, on Page 10, section "c" of the final Office action, the Examiner states:

First, the Examiner posits that all references to audio in the disclosure pertain to the audio portion of an audio-video or television program provided by a television receiver.

(Final Office action, Page 10). However, this is not true. The applicants' specification as originally filed included the following paragraph:

Of the many approaches to measuring the usage of electronic entertainment equipment (commonly called "tuning" data), one approach involves the addition of an identifying code to a **radio or television program**, the distribution of the identifying code with the program throughout the relevant broadcasting system, and the detection and interpretation of the identifying code when the broadcast signal is **viewed or heard** in a statistically selected monitoring site. An example of a system which implements this type of measurement approach may be found in the following patents: U.S. Patent No. 5,481,294 to Thomas et al., who describe, inter alia, identifying codes added to the vertical blanking interval of an NTSC television broadcast; U.S. Patent No. 5,629,739 to Dougherty, who is particularly concerned with the addition of an identifying code to a low energy portion of the audio spectrum of an

NTSC signal; and U.S. Patent No. 5,404,377 to Moses, who teaches an audio encoding arrangement using signal masking to decrease the perceptibility of the identifying code. The disclosures of U.S. Patent No. 5,481,294, U.S. Patent No. 5,629,739, and U.S. Patent No. 5,404,377 are herein incorporated by reference.

(Page 1, line 8-Page 2, line 7)(emphasis added). Thus, the Examiner's "posit" that "all references to audio in the disclosure pertain to the audio portion of an audio-video or television program provided by a television receiver" is simply not correct. Applicants' specification refers to monitoring radio programming and even incorporates patents by reference that pertain to monitoring radio broadcasts.

Further, in addition to monitoring analog televisions and digital televisions, the examples illustrated in the figures of the specification also monitor set top boxes and personal computers (see Figures 1-6). In the context of monitoring personal computers, the specification clearly states:

The software agent 122 additionally may monitor the personal computer 104 for interactive uses such as Internet usage (e.g., through logging of Universal Resource Locators, URLs), application software usage, and television viewing supported by the personal computer 104. Similarly, to the extent that the digital converter 106 and the digital television set 110 are web-enabled, the software agents 114 and 118 may monitor interactive uses such as Internet usage (e.g., through logging of URLs) and application software usage, as well as television viewing.

(Page 30, lines 5-14). Thus, it is clear that the specification contemplates monitoring more than just television programs. A person of ordinary skill in

the art would understand that the techniques disclosed in the specification were applicable to both television and radio monitoring.

The Final Office action takes issue with this last point. In particular, it states:

Secondly, a person of ordinary skill in the art would have a lot of trouble utilizing a regular television receiver to detect radio signals. Television signals are coded differently from radio signals. Using Applicant's analysis the skilled artisan would be able to watch and monitor a video showing Elmer Fudd chasing Bugs Bunny on a typical radio receiver, monitor the audio output of a cell phone and/or monitor music from a speaker of a doll.

(Final Office Action, Page 11). This argument is, however, a classic example of attacking a straw man. Nowhere have the applicants contended that a radio can be used to watch a television program, nowhere do the applicants dispute the fact that a television signal is different than a radio signal, and nowhere have the applicants indicated that they monitor a video on a radio. Thus, the Examiner's comments concerning Elmer Fudd are simply irrelevant.

Looking to the actual facts presented, many of the examples described in the specification detect audio codes in the audio output by a speaker of a television or personal computer. As such, it is completely irrelevant to these systems whether the audio code output by the speaker originated in a radio signal or a television signal received by the receiver (see, for example, receiver 42 in Fig. 1 and the microphone 78 in Figure 2).

Moreover, since many of the example systems described in the specification involve the detection of audio codes and/or audio signatures,

those example systems ignore any video content being presented on the monitored equipment. Thus, if the soundtrack of the episode of Elmer Fudd chasing Bugs Bunny posited by the Examiner were tuned by a radio receiver and output by its speaker, the disclosed systems could extract any audio code present in the signal output by the radio speaker and/or extract an audio signature representative of the audio signal output by the radio speaker in *exactly* the same manner as would be done to extract an audio code and/or signature from the audio of the episode of Elmer Fudd chasing Bugs Bunny output by a television speaker. In other words, in both the radio and the television context, it is the sound signal output by the speakers that is monitored by these examples to extract audio codes and/or audio signatures. As such, the format of the broadcast signal received and processed upstream of the speakers is immaterial.

From the foregoing, it can be seen that the Examiner is quite right when he says these examples could “monitor the audio output of a cell phone and/or monitor music from a speaker of a doll.” This is completely in keeping with the statement in the specification that “although not shown in Figures 2-5, the digital television reception equipment of the embodiments shown therein may further include auxiliary digital television equipment such as a VCR, a digital video disk player, a video game, or other entertainment system.” (Page 53, line 22-Page 54, line 3)(emphasis added). Thus, the specification clearly informs a person of ordinary skill in the art that the type of monitored entertainment system is not restricted to digital or analog television, but instead extends to VCRs, digital video disk players, video

games, and/or other entertainment systems. A person of ordinary skill in the art would unmistakably recognize “other entertainment systems” as including audio systems such as radio and stereo systems³.

The Final Office action makes two additional statements in support of the rejection of claim 159. The first statement, namely, “at the time of filing the application, Applicant [sic] did not disclose or suggest monitoring audio from a radio signal,” (Final Office action, Page 11) is a conclusion, not a reason to support the rejection. Moreover, that conclusion has been shown above to be refuted by the evidence. The second statement, namely, “the current application does not describe how radio is utilized in the instant invention, ” (Id.) has been shown above to be false. In the context of, for example, extracting audio codes and/or audio signatures from the signal output by a speaker, the process is the same irrespective of whether the speaker is coupled to a television, a radio, a stereo, a personal computer, etc. Therefore, the disclosed examples fully and sufficiently explain how this is performed in the context of radio signals. In the case of the software agent examples, the software agents are plainly described as logging operating system events which, again, is equally applicable to television, set top box, personal computer and radio/stereo systems. Given these disclosures, a person of

³ It is beyond dispute that the broadest reasonable definition of “entertainment system” includes stereo systems, since stereo systems have been advertised and sold to the general public as “entertainment systems” for many years prior to the filing date of this application and since furniture to house televisions and stereo systems have been sold as “entertainment centers” for at least a similar length of time.

ordinary skill in the art would immediately recognize how to utilize the disclosed techniques to monitor radio.

In view of the foregoing, the § 112, first paragraph, rejection of claim 159 is in error and must be overturned.

G. The Examiner Applies An Inconsistent Level Of Ordinary Skill In The § 112 And Art Rejections

Before closing, it is noted that the Final Office action applies a very different standard for the level of skill of a person of ordinary skill in the art when reading applicants' specification for purposes of 35 U.S.C. § 112, first paragraph, and the level of skill of a person of ordinary skill in the art when reading the prior art for purposes of rejecting the applicants' claims. As discussed above, in the 35 U.S.C. § 112, first paragraph, context, the Examiner applies a very low level of skill in that a person of ordinary skill in the art is allegedly incapable of understanding that applicants' disclosed audience rating system is applicable to radio. However, in rejecting the applicants' claims based on the prior art, the level of ordinary skill is much, much higher. In particular, the Examiner states:

However, he [Aras] fails to specifically disclose that the audience rating system is for radio as recited in the claims.

The prior art is replete with numerous examples of collecting broadcast audience behavior for statistical analysis purposes by Market Research companies. For example, a Market Research company estimating market share to determine advertisement rates. First, note that patents 4,718,106, 4,955,070, WO

91/11062, WP94/11989, 5,526,427, 5,574,962 (provided by Applicant [sic] in the IDS filed 6/22/2001) all disclose collecting behavior from radio and/or television audiences. Secondly, note that patent 5,594,934 (Lu et al.) describes audience measurement system for television and radio (see the instant application at page 3, line 5, the IDS filed by applicant [sic] on 6/22/2001 and the Declaration provided by Michael Dolan at page 3). Thirdly, television and radio are technically related and are represented by the leading alliance for broadcast signals (National Association of Broadcasters)(See the Declaration provided by Michael A. Dolan at page 3).

(Final Office action, Page 7). In other words, the Final Office action takes the self-contradictory position that, in reviewing the applicants' specification for compliance with § 112, first paragraph, a person of ordinary skill in the art could not understand the applicability of the applicants' disclosure to radio, but in reviewing the Aras specification which the Office action acknowledges "fails to specifically disclose that the audience rating system is for radio," that same person would have no trouble understanding its applicability to radio! This remarkably inconsistent application of the level of ordinary skill in the art demonstrates that the § 112, first paragraph, rejections are in error as they apply an overly strict standard against the applicants' specification.

This final point is underscored by the fact that, in reading the teachings of Aras as applying to radio, the Examiner relies upon Lu et al., U.S. Patent 5,594,934, for its teachings of an "audience measurement system for television and radio." (Final Office action, Page 7). However, as noted above, Lu et al., U.S. Patent 5,594,934, is incorporated by reference into the applicants' specification (see Page 3, lines 5-6). Therefore, to the extent a person of

ordinary skill in the art could review the Lu et al. Patent and understand that the Aras television monitoring system was also applicable to radio, a person of ordinary skill in the art could review that same Lu et al. Patent, *which forms part of the applicants' specification through incorporation by reference*, and understand that the applicants' disclosed examples are also applicable to radio.

Accordingly, it is clear that the Final Office action applies an inconsistent level of ordinary skill in reviewing the applicants' claims and specification for compliance with the § 112, first paragraph, standard and in reviewing applicants' claims for patentability over the art. In particular, the level of ordinary skill applied in the § 112, first paragraph, is excessively low. When reviewed with an appropriate level of ordinary skill, it is clear that all of the pending claims meet the requirements of 35 U.S.C. § 112, first paragraph. Accordingly, the 35 U.S.C. § 112, first paragraph, rejections of claims 70, 71 and 159 are in error and must be withdrawn.

Ground 2. The Examiner's Contention That Claims 70, 71 And 159 Are Anticipated By Aras et al. Is In Error

The Final Office action rejected claims 70, 71 and 159⁴ as being unpatentable over Aras, U.S. Patent 5,872,588. Independent claim 70 recites a method including extracting at least one identification code for at least one digital stream of a first channel *from a control stream* of a multiplexed digital transmission. Thus, the rejection of claim 70 presents a threshold issue as to what constitutes a “control stream.”

To properly investigate the meaning of the term “control stream,” it is necessary to have a basic understanding of digital television broadcasting. Digital television signals are transmitted as a multiplexed set of audio, video, and control streams. In other words, each television program is packaged as a stream of audio packets and a stream of video packets. (A program may also include a stream of data packets for carrying additional information related to a program such as, for example, closed captioning information.) Each packet of each data stream includes a header which identifies the type of the packet (e.g., audio, video, data, etc.) and the program to which it pertains. The portion of the header that identifies the program is commonly referred to as a program identification code (PID). The streams of packets of a single

⁴ Applicants respectfully submit that the rejection of claim 70 is in error and, thus, the rejections of claims 70, 71 and 159 must be overturned. However, applicants respectfully submit that claims 70, 71 and 159 stand or fall together with respect to the Aras rejection. Thus, the patentability of claims 71 and 159 over Aras is not argued separately from the patentability of claim 70 over that reference.

program are multiplexed into a single stream and broadcast on a single broadcast channel.

It is possible to broadcast more than one program in a single broadcast channel. Thus, the streams of packets of multiple programs may be multiplexed and broadcast together as a single stream of packets on a single broadcast channel. Of course, the streams of one or more other programs may also be multiplexed and broadcast on other broadcast channels. By way of background, the broadcast channel is typically referred to as a major channel, whereas the programs contained within a major channel are typically referred to as minor channels.

Digital reception equipment is adapted to read the PIDs of the packet headers to determine which packets apply to a program tuned by a user. In particular, the digital reception equipment tunes to a particular broadcast channel and then reviews the PID of every packet received on that broadcast channel. Received packets containing the PID corresponding to the tuned program are retained and processed to present the tuned program on the user's television. Received packets that do not contain the PID corresponding to the tuned program may be discarded.

A program guide is broadcast with the programs. The program guide contains data correlating broadcast programs to their respective PIDs. As a result, the program guide enables the reception equipment to identify the packets associated with a program to be tuned and, thus, enables the tuning of a program carried in the multiplexed stream of packets. The program guide stream is often referred to as a control stream because the program guide

stream provides the necessary control information to tune a program. The control stream is broadcast as a plurality of packets and may be multiplexed with the audio, video and/or data packets of the broadcast programs.

In view of the foregoing, the term "control stream" would be understood by a person of ordinary skill in the art to encompass a program guide or other stream directed purely to the operation of the reception equipment as opposed to data streams reflecting content which may be tuned and presented by the reception equipment.

Applicants' specification contemplates this digital television broadcast scheme and operates under this common understanding of the term "control stream." For example, it states:

Changes in the methods of measuring the reception of television or radio programming are required because of a planned change-over from analog to digital broadcasting. In the U.S., the change-over is scheduled to be phased in by the year 2006, as documented in the Federal Communication Commission's Mass Media Docket 87-268, with particular reference to the Fifth Report and Order, FCC 97-116, April 3, 1997 and to the Sixth Report and Order, FCC 97-115, April 3, 1997. Some of the changes, and their respective impacts on approaches used for measuring analog broadcasts, include the following: (1) digital broadcast techniques do not use a vertical blanking interval and, therefore, the program tracking and identifying codes that are written in the vertical blanking interval of analog broadcast signals will not be transmitted; (2) multiple signal formats and associated multiple display formats having, among other features, differing height-to-width ratios and different resolutions are allowed, so that existing video signal correlation methods used with analog broadcasts may essentially be disabled because these methods depend on

having the same pictorial feature appear at corresponding places on the measured and reference displays; (3) ***a broadcaster can transmit as many as six programs (arrayed as a sequence of data packets, where each data packet is labeled as to which of the programs' data is carried therein) within an assigned 6 MHZ frequency band by trading off pictorial resolution for an increase in the number of programs*** so that (i) digital signal compression methods used to decrease the spectrum space required by a program destroy program identifying codes embedded in an original, high-resolution, program master, and (ii) determining which channel has been tuned by a receiver does not uniquely identify a program being viewed if more than one program is being transmitted in that channel; and, (4) data other than television broadcasting may be co-transmitted in the same channel and, in some cases, it is expected that the other data will be related in some manner to the co-transmitted programming so that a viewer can interact with the TV programming (e.g., to obtain a program guide or detailed information on an advertised product, to automatically switch to a desired program, or to take part in an audience-participation program).

. . . Moreover, although the change in technology may obviate the use of some of the codes, such as those described above, other codes (e.g., digital data packet codes telling a receiving site which of several interleaved programs is associated with a given data packet) are expected to be broadcast both with television programming and with any co-transmitted data that are related to, and intended to be used in conjunction with, one or more of the programs.

(Page 4, line 3-Page 6, line 23)(emphasis added). The specification of the instant application goes on to explain how the example systems use the PIDs in the headers of a tuned data stream and/or the PIDs in the program guide to monitor digital television viewing.

In particular, the specification describes the operation of a software agent that monitors operating system events of a monitored receiver in order to track program consumption. The software agent retrieves and logs PIDs from tuned data packets when an operating system event is associated with such a data packet. The software agent also retrieves and logs PIDs from the program guide/control stream when an operating system event is associated with the program guide/control stream. Turning first to the data packet context, the specification states:

A software agent 500 is shown in Figure 7. The software agent 500 can be used for any of the software agents 112, 118, and 122. As shown at a block 502 of the software agent 500, the software agent 500 copies the current operating task. If the current operating task uses a packet of television programming as determined at a block 504, the software agent 500 at a block 506 determines ***whether the data packet has a decodable packet label including a decodable program identification code, name, or other indicia. This program identification data packet is expected to be a feature of digital television programming, particularly if multiple programs are packed simultaneously as minor channels in a broadcast channel in a digital broadcasting environment, and is expected to identify the program tuned by the monitored television.***

... if the data packet does have a decodable packet label, the software agent 500 determines at a block 510 whether the packet label from the data packet of the current operating task is the same as the packet label previously determined by the software agent 500. ... ***if the packet label from the data packet of the current operating system task is not the same as the packet label previously determined at the block 506, the software agent 500 at a block 512 logs the identification of the***

television program as contained in the program label and also logs the time. . . .

(Page 46, line 17-Page 48, line 10). Thus, applicants' specification clearly contemplates logging PIDs from a data stream (e.g., an audio or video stream) when the operating system event involves an operation on a packet from the data stream.

Applicants' specification also contemplates logging PIDs from a control stream. For example, the specification states:

If the current operating task ***does not use a packet of television programming*** as determined at a block 504, the software agent 500 at a block 514 determines whether the current operating task is a command to other monitored equipment (e.g., a command to the digital television receiver 110 to tune a different channel and to select a particular one of the N programs being broadcast in that channel).

. . . If the current operating task is not a command to other monitored equipment, the software agent 500 at a block 518 determines if co-transmitted data (i.e., data that is related to one of the television programs being broadcast in a channel and that is transmitted during the same time interval as the program) has been selected by a viewer. ***Co-transmitted data may comprise a guide to other available television programming***, catalog-like details on products being advertised on the co-transmitted program, and the like. ***Some of these proposed uses of co-transmitted data will be configured so that one can infer what program is being viewed from a URL or other label that logically links the co-transmitted data to the television program. Accordingly, the software agent 500 at a block 520 searches the header portion of a task for such URL or other label, and logs such URL or other label that is found.***

(Page 48, line 12-Page 49, line 18). Thus, applicants' specification clearly contemplates logging PIDs from program guides/control streams when the detected operating system event does not relate to a data packet, but instead relates to the program guide.

In rejecting claim 70, the Final Office action contends that Aras also teaches or suggests logging PIDs from program guides/control streams. This is not correct. While Aras certainly discloses extracting an identification code, that code is extracted from a data stream, not a control stream, of a multiplexed digital transmission. The Final Office action relies upon the general reference to MPEG compression in Aras for evidence of such a control stream. However, to the extent MPEG includes control information in a form that may be referred to as a "control stream," that control information is merely used as a roadmap to reconstruct frames via the MPEG decompression process. It is quite clear that the codes of Aras (i.e., the AVI codes) are not carried by that "control stream." Indeed, the codes of Aras have nothing to do with the MPEG algorithm.

Further, Aras in no way timestamps codes which appear in the "control stream" associated with the MPEG process as a vehicle for determining when reception of a channel begins. Thus, the reference to MPEG in Aras does not disclose extracting an identification code from the control stream of a multiplexed transmission as recited in the claim 70 and the reference to MPEG in Aras is plainly irrelevant to the patentability issue.

This point is irrefutably demonstrated by reviewing the discussion of the identification codes in the specification of Aras. As shown in FIG. 3 of

Aras, Aras contemplates inserting identification codes (AVI-B, AVI-F) into a data stream, not a control stream. Indeed, Aras could not be more explicit on this point. It states:

AVI information [identification codes] may be pre-embedded in the AVM [audio visual material] or integrated on the fly as the AVM is broadcast or the AVI information may be partially pre-embedded and partially embedded on the fly. ... only AVI-B, only AVI-F, or a combination of AVI-B and AVI-F field may be embedded into the content, as shown in FIG. 3.

(Aras, Col. 11, ll.44-67)(emphasis added). If that were not demonstration enough, Aras also states, “Each of the plurality of AVMs that are provided to the home station would have the AVI embedded in their respective AVM data streams (or at least those for which behavior and monitoring is desired).”

(Aras, Col. 12, ll. 18-21)(emphasis added). Therefore, it is quite clear that Aras only discloses embedding and extracting identification codes from a data stream. There is no disclosure or suggestion in Aras of extracting an identification code (e.g., an AVI) from a control stream or program guide, or of time stamping the identification codes extracted from such a control stream/program guide.

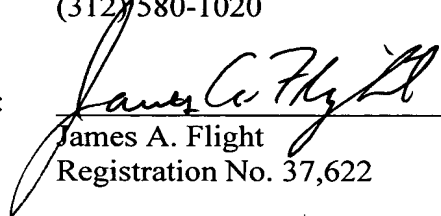
Therefore, Aras cannot be said to teach or suggest the recitations of independent claim 70. Accordingly, claims 70, 71 and 159 are patentable to the applicants over Aras and the rejection of claims 70, 71 and 159 must be overturned.

In view of the foregoing remarks, it is respectfully submitted that all of the rejections made in the final Office action should be overturned.

Respectfully submitted,

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VIII. Claims Appendix

70. (Previously Presented) An audience rating system for digital television comprising the steps of:

extracting at least one identification code for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins;

recording at least one identification code extracted and thus time reception of the first channel begins;

extracting at least one identification code for at least one digital stream of any subsequent channel, from the control stream of the multiplexed digital transmission, when reception of the subsequent channel by the receiver begins; and

recording at least one identification code extracted and the time reception of the subsequent channel begins.

71. (Previously Presented) The audience rating system of claim 70, further comprising the step of recording the time that reception by the receiver is ended.

159. (Previously Presented) The audience rating system of Claim 70, wherein said audience rating system is for digital television and radio.

IX. Evidence Appendix

No evidence under 37 C.F.R. § 1.130, 1.131, or 1.132 is being relied upon. The evidence relied upon is reflected in the following table.

Reference	Entered in Record
Thomas, US Patent 5,481,294	Incorporated by reference in specification as filed
Lu et al., US Patent 5,594,934	Incorporated by reference in specification as filed
Aras et al., US Patent 5,872,588	Cited in second supplemental information disclosure statement dated January 4, 2000, and relied upon to reject the claims on appeal in the Final Office action

Copies of the above-noted evidence are attached hereto.

X. Related Proceedings Appendix

None.